



## SEQUENCE LISTING

<110> Wang, Chang Yi

<120> Immunogenic peptide composition as vaccines for the prevention and treatment of Alzheimer's Disease

<130> 1151-4167

<140> 09/865,294

<141> 2001-05-25

<160> 77

<170> PatentIn version 3.1

<210> 1

<211> 15

<212> PRT

<213> Hepatitis B virus

<400> 1

Phe	Phe	Leu	Leu	Thr	Arg	Ile	Leu	Thr	Ile	Pro	Gln	Ser	Leu	Asp
1				5					10					15

<210> 2

<211> 30

<212> PRT

<213> Bordetella pertussis

<400> 2

73  

Lys	Lys	Leu	Arg	Arg	Leu	Leu	Tyr	Met	Ile	Tyr	Met	Ser	Gly	Leu	Ala
1				5					10					15	

Val	Arg	Val	His	Val	Ser	Lys	Glu	Glu	Gln	Tyr	Tyr	Asp	Tyr
			20					25					30

<210> 3

<211> 17

<212> PRT

<213> Clostridium tetani

<400> 3

Lys	Lys	Gln	Tyr	Ile	Lys	Ala	Asn	Ser	Lys	Phe	Ile	Gly	Ile	Thr	Glu
1					5				10						15

Leu

<210> 4  
 <211> 22  
 <212> PRT  
 <213> Clostridium tetani

<400> 4

Lys Lys Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg Val Pro Lys  
 1 5 10 15

Val Ser Ala Ser His Leu  
 20

<210> 5  
 <211> 15  
 <212> PRT  
 <213> Bordetella pertussis

<400> 5

Tyr Met Ser Gly Leu Ala Val Arg Val His Val Ser Lys Glu Glu  
 1 5 10 15

<210> 6  
 <211> 27  
 <212> PRT  
 <213> Clostridium tetani

<400> 6

Tyr Asp Pro Asn Tyr Leu Arg Thr Asp Ser Asp Lys Asp Arg Phe Leu  
 1 5 10 15

Gln Thr Met Val Lys Leu Phe Asn Arg Ile Lys  
 20 25

<210> 7  
 <211> 24  
 <212> PRT  
 <213> Pertusaria trachythallina

<400> 7

Gly Ala Tyr Ala Arg Cys Pro Asn Gly Thr Arg Ala Leu Thr Val Ala  
 1 5 10 15

Glu Leu Arg Gly Asn Ala Glu Leu  
 20

<210> 8  
 <211> 15  
 <212> PRT  
 <213> Measles virus

<400> 8

Leu Ser Glu Ile Lys Gly Val Ile Val His Arg Leu Glu Gly Val  
 1 5 10 15

<210> 9  
 <211> 20  
 <212> PRT  
 <213> Escherichia coli

<400> 9

Gly Ile Leu Glu Ser Arg Gly Ile Lys Ala Arg Ile Thr His Val Asp  
 1 5 10 15

Thr Glu Ser Tyr  
 20

<210> 10  
 <211> 17  
 <212> PRT  
 <213> Clostridium tetani

<400> 10

Trp Val Arg Asp Ile Ile Asp Asp Phe Thr Asn Glu Ser Ser Gln Lys  
 1 5 10 15

Thr

<210> 11  
 <211> 16

<212> PRT  
 <213> Clostridium tetani

<400> 11

Asp Val Ser Thr Ile Val Pro Tyr Ile Gly Pro Ala Leu Asn His Val  
 1 5 10 15

<210> 12  
 <211> 25  
 <212> PRT  
 <213> Chlamydia trachomatis

<400> 12

Ala Leu Asn Ile Trp Asp Arg Phe Asp Val Phe Cys Thr Leu Gly Ala  
 1 5 10 15

Thr Thr Gly Tyr Leu Lys Gly Asn Ser  
 20 25

<210> 13  
 <211> 23  
 <212> PRT  
 <213> Diphtheria

<400> 13

Asp Ser Glu Thr Ala Asp Asn Leu Glu Lys Thr Val Ala Ala Leu Ser  
 1 5 10 15

Ile Leu Pro Gly His Gly Cys  
 20

<210> 14  
 <211> 39  
 <212> PRT  
 <213> Diphtheria

<400> 14

Glu Glu Ile Val Ala Gln Ser Ile Ala Leu Ser Ser Leu Met Val Ala  
 1 5 10 15

Gln Ala Ile Pro Leu Val Gly Glu Leu Val Asp Ile Gly Phe Ala Ala  
 20 25 30

Thr Asn Phe Val Glu Ser Cys  
35

<210> 15  
<211> 21  
<212> PRT  
<213> Plasmodium falciparum

<400> 15

Asp His Glu Lys Lys His Ala Lys Met Glu Lys Ala Ser Ser Val Phe  
1 5 10 15

Asn Val Val Asn Ser  
20

<210> 16  
<211> 17  
<212> PRT  
<213> Schistosoma mansoni

<400> 16

Lys Trp Phe Lys Thr Asn Ala Pro Asn Gly Val Asp Glu Lys His Arg  
1 5 10 15

His

<210> 17  
<211> 14  
<212> PRT  
<213> Escherichia coli

<400> 17

Gly Leu Gln Gly Lys His Ala Asp Ala Val Lys Ala Lys Gly  
1 5 10

<210> 18  
<211> 19  
<212> PRT  
<213> Escherichia coli

<400> 18

Gly Leu Ala Ala Gly Leu Val Gly Met Ala Ala Asp Ala Met Val Glu  
1 5 10 15

Asp Val Asn

<210> 19

<211> 20

<212> PRT

<213> Escherichia coli

<400> 19

Ser Thr Glu Thr Gly Asn Gln His His Tyr Gln Thr Arg Val Val Ser  
1 5 10 15

Asn Ala Asn Lys  
20

<210> 20

<211> 20

<212> PRT

<213> Hepatitis B virus

<400> 20

Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser Ala  
1 5 10 15

Leu Tyr Arg Glu  
20

<210> 21

<211> 12

<212> PRT

<213> Chlamydia trachomatis

<400> 21

Thr Ile Asn Lys Pro Lys Gly Tyr Val Gly Lys Glu  
1 5 10

<210> 22

<211> 15  
 <212> PRT  
 <213> Measles virus

<400> 22

Leu Ser Glu Ile Lys Gly Val Ile Val His Arg Leu Glu Gly Val  
 1 5 10 15

<210> 23  
 <211> 16  
 <212> PRT  
 <213> Measles virus

<400> 23

Asp Leu Ser Asp Leu Lys Gly Leu Leu Leu His Lys Leu Asp Gly Leu  
 1 5 10 15

<210> 24  
 <211> 16  
 <212> PRT  
 <213> Measles virus

<400> 24

Glu Ile Ser Glu Ile Arg Gly Ile Ile Ile His Arg Ile Glu Gly Ile  
 1 5 10 15

<210> 25  
 <211> 16  
 <212> PRT  
 <213> Measles virus

<400> 25

Asp Val Ser Asp Val Lys Gly Val Val Val His Lys Val Asp Gly Val  
 1 5 10 15

<210> 26  
 <211> 16  
 <212> PRT  
 <213> Measles virus

<400> 26

Asp Phe Ser Asp Phe Lys Gly Phe Phe Phe His Lys Phe Asp Gly Phe  
 1 5 10 15

<210> 27  
 <211> 15  
 <212> PRT  
 <213> Measles virus

<400> 27

Ile Ser Glu Ile Lys Gly Val Ile Val His Lys Ile Glu Gly Ile  
 1 5 10 15

<210> 28  
 <211> 15  
 <212> PRT  
 <213> Measles virus

<400> 28

Met Thr Glu Ile Arg Thr Val Ile Val Thr Arg Met Glu Thr Met  
 1 5 10 15

<210> 29  
 <211> 15  
 <212> PRT  
 <213> Measles virus

<400> 29

Leu Ser Glu Ile Lys Gly Val Ile Val His Lys Leu Glu Gly Val  
 1 5 10 15

<210> 30  
 <211> 15  
 <212> PRT  
 <213> Measles virus

<400> 30

Ile Ser Glu Ile Lys Gly Val Ile Val His Lys Ile Glu Gly Ile  
 1 5 10 15

<210> 31  
 <211> 15  
 <212> PRT  
 <213> Measles virus

<400> 31

Ile Thr Glu Ile Arg Thr Val Ile Val Thr Arg Ile Glu Thr Ile  
 1 5 10 15

<210> 32  
 <211> 15  
 <212> PRT  
 <213> Measles virus

<400> 32

Met Ser Glu Ile Lys Gly Val Ile Val His Lys Leu Glu Gly Met  
 1 5 10 15

<210> 33  
 <211> 15  
 <212> PRT  
 <213> Measles virus

<400> 33

Leu Thr Glu Met Arg Thr Val Ile Val Thr Arg Met Glu Thr Val  
 1 5 10 15

<210> 34  
 <211> 15  
 <212> PRT  
 <213> Measles virus

<400> 34

Ile Ser Glu Ile Lys Gly Val Ile Val His Lys Ile Glu Gly Ile  
 1 5 10 15

<210> 35  
 <211> 15  
 <212> PRT  
 <213> Measles virus

<400> 35

Ile Thr Glu Ile Arg Thr Val Ile Val Thr Arg Ile Glu Thr Ile  
 1 5 10 15

<210> 36  
 <211> 15  
 <212> PRT

<213> Measles virus

<400> 36

Met	Ser	Glu	Met	Lys	Gly	Val	Ile	Val	His	Lys	Met	Glu	Gly	Met
1				5					10					15

<210> 37

<211> 15

<212> PRT

<213> Measles virus

<400> 37

Leu	Thr	Glu	Ile	Arg	Thr	Val	Ile	Val	Thr	Arg	Leu	Glu	Thr	Val
1				5					10					15

<210> 38

<211> 19

<212> PRT

<213> Measles virus

<400> 38

Ile	Ser	Ile	Ser	Glu	Ile	Lys	Gly	Val	Ile	Val	His	Lys	Ile	Glu	Gly
1				5					10					15	

Ile Leu Phe

<210> 39

<211> 19

<212> PRT

<213> Measles virus

<400> 39

Ile	Ser	Met	Thr	Glu	Ile	Arg	Thr	Val	Ile	Val	Thr	Arg	Met	Glu	Thr
1				5					10					15	

Met Leu Phe

<210> 40

<211> 19

<212> PRT

<213> Measles virus

<400> 40

Ile	Ser	Leu	Ser	Glu	Ile	Lys	Gly	Val	Ile	Val	His	Lys	Leu	Glu	Gly
1				5					10					15	

Val Leu Phe

<210> 41

<211> 19

<212> PRT

<213> Measles virus

<400> 41

Ile	Ser	Ile	Ser	Glu	Ile	Lys	Gly	Val	Ile	Val	His	Lys	Ile	Glu	Gly
1				5					10					15	

Ile Leu Phe

<210> 42

<211> 19

<212> PRT

<213> Measles virus

<400> 42

Ile	Ser	Ile	Thr	Glu	Ile	Arg	Thr	Val	Ile	Val	Thr	Arg	Ile	Glu	Thr
1				5					10					15	

Ile Leu Phe

<210> 43

<211> 19

<212> PRT

<213> Measles virus

<400> 43

Ile	Ser	Leu	Ser	Glu	Ile	Lys	Gly	Val	Ile	Val	His	Lys	Leu	Glu	Gly
1				5					10					15	

Met Leu Phe

<210> 44  
 <211> 19  
 <212> PRT  
 <213> Measles virus

<400> 44

Ile	Ser	Met	Thr	Glu	Met	Arg	Thr	Val	Ile	Val	Thr	Arg	Met	Glu	Thr
1				5					10					15	

Val Leu Phe

<210> 45  
 <211> 19  
 <212> PRT  
 <213> Measles virus

<400> 45

Ile	Ser	Leu	Thr	Glu	Ile	Arg	Thr	Val	Ile	Val	Thr	Arg	Leu	Glu	Thr
1				5					10					15	

Val Leu Phe

<210> 46  
 <211> 19  
 <212> PRT  
 <213> Measles virus

<400> 46

Ile	Ser	Ile	Thr	Glu	Ile	Arg	Thr	Val	Ile	Val	Thr	Arg	Ile	Glu	Thr
1				5					10					15	

Ile Leu Phe

<210> 47  
 <211> 19

<212> PRT  
 <213> Measles virus

<400> 47

Ile Ser Ile Ser Glu Ile Lys Gly Val Ile Val His Lys Ile Glu Gly  
 1 5 10 15

Ile Leu Phe

<210> 48  
 <211> 19  
 <212> PRT  
 <213> Measles virus

<400> 48

Ile Ser Ile Thr Glu Ile Arg Thr Val Ile Val Thr Arg Ile Glu Thr  
 1 5 10 15

Ile Leu Phe

<210> 49  
 <211> 19  
 <212> PRT  
 <213> Measles virus

<400> 49

Ile Ser Met Ser Glu Met Lys Gly Val Ile Val His Lys Met Glu Gly  
 1 5 10 15

Met Leu Phe

<210> 50  
 <211> 19  
 <212> PRT  
 <213> Measles virus

<400> 50

Ile Ser Leu Thr Glu Ile Arg Thr Val Ile Val Thr Arg Leu Glu Thr  
 1 5 10 15

Val Leu Phe

<210> 51  
 <211> 19  
 <212> PRT  
 <213> Measles virus

<400> 51

Ile	Ser	Ile	Thr	Glu	Ile	Lys	Gly	Val	Ile	Val	His	Arg	Ile	Glu	Thr
1				5				10						15	

Ile Leu Phe

<210> 52  
 <211> 15  
 <212> PRT  
 <213> Hepatitis B virus

<400> 52

Phe	Phe	Leu	Leu	Thr	Arg	Ile	Leu	Thr	Ile	Pro	Gln	Ser	Leu	Asp
1				5				10					15	

<210> 53  
 <211> 18  
 <212> PRT  
 <213> Hepatitis B virus

<400> 53

Lys	Lys	Lys	Phe	Phe	Leu	Leu	Thr	Arg	Ile	Leu	Thr	Ile	Pro	Gln	Ser
1				5				10						15	

Leu Asp

<210> 54  
 <211> 14  
 <212> PRT  
 <213> Hepatitis B virus

<400> 54

Phe Phe Leu Leu Thr Arg Ile Leu Thr Ile Pro Gln Ser Leu  
1 5 10

<210> 55

<211> 18

<212> PRT

<213> Hepatitis B virus

<400> 55

Lys Lys Lys Leu Phe Leu Leu Thr Lys Leu Leu Thr Leu Pro Gln Ser  
1 5 10 15

Leu Asp

<210> 56

<211> 18

<212> PRT

<213> Hepatitis B virus

<400> 56

Arg Arg Arg Ile Lys Ile Ile Thr Arg Ile Ile Thr Ile Pro Leu Ser  
1 5 10 15

Ile Arg

<210> 57

<211> 18

<212> PRT

<213> Hepatitis B virus

<400> 57

Lys Lys Lys Val Arg Val Val Thr Lys Val Val Thr Val Pro Ile Ser  
1 5 10 15

Val Asp

<210> 58

<211> 18  
 <212> PRT  
 <213> Hepatitis B virus

<400> 58

Lys Lys Lys Phe Phe Phe Phe Thr Lys Phe Phe Thr Phe Pro Val Ser  
 1 5 10 15

Phe Asp

<210> 59  
 <211> 18  
 <212> PRT  
 <213> Hepatitis B virus

<400> 59

Lys Lys Lys Leu Phe Leu Leu Thr Lys Leu Leu Thr Leu Pro Phe Ser  
 1 5 10 15

Leu Asp

<210> 60  
 <211> 18  
 <212> PRT  
 <213> Hepatitis B virus

<400> 60

Lys Lys Lys Ile Ile Thr Ile Thr Arg Ile Ile Thr Ile Ile Thr Thr  
 1 5 10 15

Ile Asp

<210> 61  
 <211> 17  
 <212> PRT  
 <213> Hepatitis B virus

<400> 61

Lys Lys Lys Ile Ile Thr Ile Thr Arg Ile Ile Thr Ile Ile Thr Thr

1

5

10

15

Ile

<210> 62  
 <211> 18  
 <212> PRT  
 <213> Hepatitis B virus

&lt;400&gt; 62

Lys Lys Lys Met Met Thr Met Thr Arg Met Ile Thr Met Ile Thr Thr  
 1 5 10 15

Ile Asp

<210> 63  
 <211> 16  
 <212> PRT  
 <213> Hepatitis B virus

&lt;400&gt; 63

Phe Ile Thr Met Asp Thr Lys Phe Leu Leu Ala Ser Thr His Ile Leu  
 1 5 10 15

<210> 64  
 <211> 19  
 <212> PRT  
 <213> Hepatitis B virus

&lt;400&gt; 64

Lys Lys Lys Phe Ile Thr Met Asp Thr Lys Phe Leu Leu Ala Ser Thr  
 1 5 10 15

His Ile Leu

<210> 65  
 <211> 42  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 65

Asp	Ala	Glu	Phe	Arg	His	Asp	Ser	Gly	Tyr	Glu	Val	His	His	Gln	Lys
1				5					10					15	

Leu	Val	Phe	Phe	Ala	Glu	Asp	Val	Gly	Ser	Asn	Lys	Gly	Ala	Ile	Ile
			20					25					30		

Gly	Leu	Met	Val	Gly	Gly	Val	Val	Ile	Ala
		35					40		

&lt;210&gt; 66

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 66

Asp	Ala	Glu	Phe	Arg	His	Asp	Ser	Gly	Tyr	Glu	Val	His	His	Gln	Lys
1				5					10					15	

Leu	Val	Phe	Phe	Ala	Glu	Asp	Val	Gly	Ser	Asn	Lys
			20					25			

&lt;210&gt; 67

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 67

Asp	Ala	Glu	Phe	Arg	His	Asp	Ser	Gly	Tyr	Glu	Val	His	His
1				5					10				

&lt;210&gt; 68

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 68

Asp	Ala	Glu	Phe	Arg	His	Asp	Ser	Gly	Tyr	Glu	Val
1				5					10		

<210> 69  
 <211> 10  
 <212> PRT  
 <213> Homo sapiens

<400> 69

Asp Ala Glu Phe Arg His Asp Ser Gly Tyr  
 1 5 10

<210> 70  
 <211> 45  
 <212> PRT  
 <213> Hepatitis B virus

<400> 70

Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys  
 1 5 10 15

Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Gly Gly Phe Phe  
 20 25 30

Leu Leu Thr Arg Ile Leu Thr Ile Pro Gln Ser Leu Asp  
 35 40 45

<210> 71  
 <211> 30  
 <212> PRT  
 <213> Measles virus

<400> 71

Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Lys Ile Ser Ile Thr Glu  
 1 5 10 15

Ile Lys Gly Val Ile Val His Arg Ile Glu Thr Ile Leu Phe  
 20 25 30

<210> 72  
 <211> 32  
 <212> PRT  
 <213> Measles virus

<400> 72

Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val Lys Ile Ser Ile  
 1 5 10 15

Thr Glu Ile Lys Gly Val Ile Val His Arg Ile Glu Thr Ile Leu Phe  
 20 25 30

<210> 73  
 <211> 34  
 <212> PRT  
 <213> Measles virus

<400> 73

Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Lys Ile  
 1 5 10 15

Ser Ile Thr Glu Ile Lys Gly Val Ile Val His Arg Ile Glu Thr Ile  
 20 25 30

Leu Phe

<210> 74  
 <211> 48  
 <212> PRT  
 <213> Measles virus

<400> 74

Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Gln Lys  
 1 5 10 15

Leu Val Phe Phe Ala Glu Asp Val Gly Ser Asn Lys Lys Ile Ser Ile  
 20 25 30

Thr Glu Ile Lys Gly Val Ile Val His Arg Ile Glu Thr Ile Leu Phe  
 35 40 45

<210> 75  
 <211> 34  
 <212> PRT  
 <213> Measles virus

<400> 75

Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Lys Ile  
 1 5 10 15

Ser Ile Ser Glu Ile Lys Gly Val Ile Val His Lys Ile Glu Gly Ile  
 20 25 30

Leu Phe

<210> 76  
 <211> 34  
 <212> PRT  
 <213> Measles virus

<400> 76

Asp Ala Glu Phe Arg His Asp Ser Gly Tyr Glu Val His His Lys Ile  
 1 5 10 15

Ser Ile Thr Glu Ile Arg Thr Val Ile Val Thr Arg Ile Glu Thr Ile  
 20 25 30

Leu Phe

<210> 77  
 <211> 6  
 <212> PRT  
 <213> Artificial

<220>  
 <223> synthetic peptide linker

<220>  
 <221> MISC\_FEATURE  
 <222> (3)..(3)  
 <223> X = ANY AMINO ACID

<220>  
 <221> MISC\_FEATURE  
 <222> (5)..(5)  
 <223> X = ANY AMINO ACID

<400> 77

B3

cont 1

Pro Pro Xaa Pro Xaa Pro

5